143. (New) The pharmaceutical composition of claim 85, wherein the costimulation of proliferation of human T lymphocytes is exhibited at a dilution of OKT-3 of 1:2,500.

144. (New) The pharmaceutical composition of claim 85, wherein the costimulation of proliferation of human T lymphocytes is exhibited at a dilution of OKT-3 of 1:1,000.

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145. (New) The pharmaceutical composition of claim 86, wherein the costimulation of proliferation of human T lymphocytes is exhibited at a dilution of OKT-3 of 1:10,000.

146. (New) The pharmaceutical composition of claim 86, wherein the costimulation of proliferation of human T lymphocytes is exhibited at a dilution of OKT-3 of 1:5,000.

147. (New) The pharmaceutical composition of claim 86, wherein the costimulation of proliferation of human T lymphocytes is exhibited at a dilution of OKT-3 of 1:2,500.

148. (New) The pharmaceutical composition of claim 86, wherein the costimulation of proliferation of human T lymphocytes is exhibited at a dilution of OKT-3 of 1:1,000.

REMARKS

Claims 71-76, 78-83, 85, 86, and 88-100 are under consideration in the present application. Claims 71, 76, 78, 83, 85, 86 and 88 and 97 have been amended and claims 101-148 have been added to more particularly point out and distinctly claim that which Applicant regards as the invention.

The amendment to claims 71-75, 78-82, 85, and 89-96 is fully supported by the specification, for example in Exemplary Embodiment 5.2 at page 16, lines 9-32 of the

specification. Claims 78, 83, 85 and 86 have been amended to provide proper antecedent basis. The amendment to claims 88 and 97 is fully supported in the specification, for example at page 7, lines 1-21. Support for new claims 101, 108 and 115 can be found in the specification, for example on page 5 at lines 20-21 and in FIG. 8. Support for new claims 102, 109 and 116 can be found in the specification, for example on page 5 at lines 23-26 and in FIG. 8. Support for new claims 103, 110 and 117 can be found in the specification, for example on page 5 at lines 23-26 and in FIG. 7. Support for new claims 104, 111 and 118 can be found in the specification, for example on page 5 at lines 23-26 and in FIG. 7 . Support for new claims 105, 112 and 119 can be found in the specification, for example on page 5 at lines 23-26 and in FIG. 7. Support for new claims 106, 113 and 120 can be found in the specification, for example on page 5 at lines 27-29 and in FIG. 9. Support for new claims 107, 114 and 121 can be found in the specification, for example on page 18 at lines 3-6 and in FIG. 10. Support for new claims 122-124 can be found in the specification, for example on page 5 at lines 20-29, on page 18, lines 3-6, and in FIGS. 7-10. Support for new claims 125-148 can be found in the specification, for example in FIG. 7D. No new matter is added.

Following entry of the amendments made herein, claims 71-76, 78-83, 85, 86, and 88-148 will be pending in the present application.

PRIORITY

The Examiner states that English translations of the German priority documents for the present application, patent application numbers DE 197 41 929.1 and DE 198 21 060.4, have not been provided. The Examiner further states that it is unclear whether the present claims are fully supported by the priority documents. In response, Applicant submits herewith certified translations of the priority documents, which verify full support for the instant claims.

FORMAL DRAWINGS

Applicant acknowledges the objections to the drawings noted on form PTO-948. In response, Applicant submits herewith formal drawings that comply with 37 C.F.R. § 1.84. Accordingly, Applicant requests that the objections to the drawings be withdrawn.

INFORMATION DISCLOSURE STATEMENT

The Examiner has requested dates of submission for two of the sequences, accession numbers W75956 and V53199, cited by Applicant in an Information Disclosure Statement. Applicant notes that the W75956 and V53199 accession numbers correspond to accession numbers for the Derwent Genseq patent nucleotide and patent protein databases. The date of "first entry" for both W75956 and V53199, as indicated on the Genseq printouts (attached as Exhibit D), is December 11, 1998. The corresponding GenBank Accession Nos. for W75956 and V53199 are NP_036224 and NM_ 012092, respectively. NP_036224 and NM_ 012092 are derived from the entry assigned GenBank Accession No. AB023135, submitted on February 1, 1999.

THE REJECTIONS UNDER 35 U.S.C. § 112, SECOND PARAGRAPH SHOULD BE WITHDRAWN

The specification has been amended to change the drawing reference character to correctly correspond with the formal drawings being submitted concurrently herewith. The specification has also been amended to include information regarding the deposit of the 84F antibody. No new matter is introduced by virtue of these amendments, and the amendments are fully supported by the specification of the subject application and the claims as originally filed. Accordingly, Applicant kindly requests that they be entered into the instant application.

Claims 71-75, 78-82, 85, and 89-96 are rejected under 35 U.S.C. § 112, second paragraph, allegedly as indefinite for the recitation that the claimed antibody "costimulates human T lymphocytes." In particular, the Examiner states that the metes and bounds of the term "costimulates" are unclear. Applicant respectfully disagrees. Applicant has taught numerous markers of costimulation in the specification, such as induction of proliferation (page 5 at lines 20-21 and in FIG. 8), upregulation of ATAC expression (page 5 at lines 23-26 and in FIG. 8), upregulation of CD25 expression (page 5 at lines 23-26 and in FIG. 7), upregulation of CD69 expression (page 5 at lines 23-26 and in FIG. 7), upregulation of TRAP expression (page 5 at lines 23-26 and in FIG. 7), induction of the ability of T lymphotyces to elicit immunoglobulin production by B lymphocytes (page 5 at lines 27-29 and in FIG. 9), and reduction of apoptosis of activated T lymphocytes (page 18 at lines 3-6 and in FIG. 10). Additionally, Applicant has taught methods of assaying for all these hallmarks of 8F4-induced costimulation (see Examples 5-7 at pages 16-18 of the

specification). Accordingly, one of skill in the art would readily recognize the metes and bounds the subject matter of claims 71-75, 78-82, 85, and 89-96, namely that those claimed antibodies and the antibodies produced by those claimed hybridomas, together with the anti-CD3 antibody OKT3, costimulate one or more of those hallmarks of 8F4-induced costimulation that are detailed in the specification. However, to expedite prosecution, Applicant has amended claims 71, 78 and 85 to recite costimulation of proliferation of human T lymphocytes as suggested by the Examiner.

Claims 78-83 and 93-96 are rejected under 35 U.S.C. § 112, second paragraph, as allegedly lacking antecedent basis for the recitation of the phrase "wherein the monoclonal antibody" in the next to last lines of claims 78 and 83. Applicant asserts that the phrase has antecedent basis in the preamble of the claim; however, to expedite prosecution, Applicant has amended claims 78 and 83 as suggested by the Examiner. These amendments clarify that which Applicant has always considered the claimed invention of claims 78-83 and 93-96, and do not narrow the scope of these claims. Applicant submits that this amendment obviates the indefiniteness rejection of claims 78-83 and 93-96 for the recitation of the phrase "wherein the monoclonal antibody" in the next to last lines of claims 78 and 83.

Claims 85 and 86 are rejected under 35 U.S.C. § 112, second paragraph, as allegedly lacking antecedent basis for the recitation of the phrase "wherein the monoclonal antibody" in the next to last lines of the claims. Applicant asserts that the phrase has antecedent basis in the preamble of the claim; however, to expedite prosecution, Applicant has amended claims 85 and 86 as suggested by the Examiner. Applicant submits that this amendment obviates the indefiniteness rejection of claims 85 and 86 for the recitation of the phrase "wherein the monoclonal antibody" in the next to last lines of the claims.

Claims 88 and 97-98 are rejected under 35 U.S.C. § 112, second paragraph, as allegedly as omitting essential steps. In particular, the Examiner states that the claims, directed to methods of making anti-8F4 antibodies, omit an essential selection step. Without agreeing with the Examiner, and merely to expedite prosecution, Applicant has amended claims 88 and 97 (and claim 98 dependent thereon) to incorporate a selection step. This amendment clarifies that which Applicant has always considered the claimed invention, by making explicit that which was implicit from the language of the claim, and does not narrow the scope of claims 88 and 97-98. Applicant submits that the amendments obviate the

rejection under 35 U.S.C. § 112, second paragraph, that claims 88 and 97-98 are indefinite for omitting an essential step.

In view of the foregoing amendments and remarks, Applicant submits that the rejections under 35 U.S.C. § 112, second paragraph, have obviated and should be withdrawn.

THE REJECTIONS UNDER 35 U.S.C. § 112, FIRST PARAGRAPH, FOR LACK OF ENABLEMENT SHOULD BE WITHDRAWN

Claims 71-76, 78-83, 85-86, and 88-100 rejected under 35 U.S.C. § 112, first paragraph, allegedly as lacking enablement.

First, the Examiner notes that the Statement of Attorneys for Applicant Regarding Permanence and Availability of Deposited Microorganisms does not state that the deposited hybridoma is the hybridoma specifically identified in the application as filed. In response, Applicant submits a second Statement of Applicant Regarding Permanence and Availability of Deposited Microorganisms, which states that the deposited hybridoma is the same as that described in the specification as filed, in particular in Examples 1-8 at pages 11-19 of the specification.

The Examiner further states that the specification should be amended to disclose the accession number of the deposited 8F4 hybridoma, the date of deposit, and the complete name and address of the depository. Applicant has so amended the specification.

Claims 71-76, 78-83, 85-86 and 88-96 are rejected under 35 U.S.C. § 112, first paragraph, for lack of enablement. The Examiner states that the claims are not enabled to the extent that they read on antibodies that (1) bind to fragments of the 8F4 polypeptide and (2) inhibit any biological activity of 8F4.

With respect to the Examiner's rejection on the basis that the claims read on antibodies that bind to fragments of 8F4, Applicant, without agreeing in any way with the Examiner's rejection, has amended claims 71, 76, 78, 83, 85 and 86 to delete the recitation of "or a fragment thereof." These amendments are made without prejudice to Applicant's right to pursue claims to antibodies that bind to fragments of 8F4 in one or more related applications. The amendments obviate the rejection of claims 71, 76, 78, 83, 85 and 86 (and claims 72-75, 79-82, and 88-96 dependent thereon) under 35 U.S.C. § 112, first paragraph, for lack of enablement of antibodies that bind to fragments of 8F4.

With respect to the rejection of certain claims under 35 U.S.C. § 112, first paragraph, for lack of enablement for encompassing antibodies that inhibit any biological activity of 8F4, Applicant has amended the claims 76, 83 and 86 to recite that the antibodies inhibit costimulation of T lymphocytes by 8F4. Applicant submits that one of skill in the art can readily assay for inhibition of costimulation of T lymphocytes by an anti-8F4 antibody using inhibition of any of the markers of or phenotypes associated with costimulation that are taught in the specification, for example at page 5, lines 17-28 and in Examples 5-7 at pages 15-19 of the specification. In addition, dependent claims 101-124 have been added that recite particular assayable phenotypes of inhibition of 8F4 costimulation of T lymphocytes.

In view of the foregoing, Applicant submits that the rejections under 35 U.S.C. § 112, first paragraph, for lack of enablement have been obviated and should be withdrawn.

CONCLUSION

Applicant respectfully requests that the above-made amendments and remarks be entered and made of record in the instant application. An allowance is earnestly requested.

Respectfully submitted,

Date October 14, 2002

Laura A. Coruzzi 30,742

Laura A. Coruzzi (Reg. No.)

By: Muna Abu-Shaar

Muna Abu-Shaar
Limited Recognition Under 37 C.F.R. § 10.9(b)
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Enclosures